

1 TITLE OF THE INVENTION

2 **COMPUTER CORNER DESK WITH WIRE MANAGEMENT CAPABILITY**

3
4 FIELD OF THE INVENTION

5 This invention pertains to a computer corner desk and the electrical and wire
6 management components used therewith.

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8 BACKGROUND OF THE INVENTION

9 In prior art corner computer desks, such as shown in FIGURE 1, the side
10 edges of the pentagonal corner extend the full depth of the sided member. The
11 keyboard is seen when extended into its inuse position, extends out beyond the front
12 face of each desk side member. In such a desk the position for the mouse pad or
13 trackball is distant from and at a higher elevation than the keyboard. This can lead
14 to carpal tunnel and other disorders of the hand and backaches as well, due to
15 necessity to use boarding house reach to use the mouse from a position behind the
16 keyboard. Details of these problems will be recited to fuller extent infra.

17 In contrast applicant's invention of a uniquely designed corner desk permits
18 the user to sit inwardly more toward the monitor. Such a position also presents less
19 stress to the body since the mouse pad or trackball is adjacent to the keyboard in the
20 more preferred embodiment.

21 Applicant is aware that larger keyboard shelves exist that include space for
22 the mouse or for a trackball, but even with that capability, the user will not have
23 overcome the problems associated with the prior art corner desk construction. The
24 term CONSTRUCTION as used here refers to physical configuration and not to
25 whether the desk is solid wood versus having a wood veneer or high pressure
26 laminate covering over a core. The prior art unit's problems include sitting in a
27 position distal to the monitor and not proximal as with this invention. Plus in a
28 crowded area, where corner desks are often employed, computer users could be
29 blocking the aisle because the keyboard is positioned beyond the edge of the desk.

30 In addition, the corner computer desk of this invention is easier and cheaper
31 to make with appropriate front beveled edges than are prior art corner desks that
32 have inside corners per FIGURE 1 as will be explained supra.

33 Other objects of the invention will in part be obvious and will in part appear
34 hereinafter.

The invention accordingly comprises the device possessing the features properties and the relation of components which are exemplified in the following detailed disclosure and the scope of the application of which will be indicated in the appended claims.

For a fuller understanding of the nature and objects of the invention reference should be made to the following detailed description, taken in conjunction with the accompanying drawings.

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BRIEF DESCRIPTION OF THE FIGURES

FIGURE 1 is a front perspective view of a prior art computer corner desk.

FIGURE 2 is a front perspective view of a computer desk according to this invention.

FIGURE 3 is a top perspective view of the computer corner desk of this invention.

FIGURE 4 is a top plan view of the computer corner desk of this invention, with two side members.

FIGURE 5 is a bottom plan view of the inventive desk with the electrical and wire management components installed.

FIGURE 6 is a top front perspective view of a portion of the desk of this invention.

FIGURE 7 is an elevational view of the rear of an adjacent furniture component and of one rear edge of the inventive desk with a vertically disposed grommet therein.

FIGURE 8 is a wiring diagram of the electrical control and wire management system.

FIGURE 9 is a diagrammatic view illustrating the mounting of one component of the desk of this invention; namely a wire management trough.

FIGURE 10 is a diagrammatic perspective view of a preferred installation of the corner desk of this invention in a corner desk system.

SUMMARY OF THE INVENTION

An advanced computer desk that features a keyboard platform positioned proximal to the user's monitor, by being disposed inset within the corner of the desk's work surface, and which platform and the positioning thereof permits both a mouse or trackball to be disposed close to the user and for the user to enjoy extra chair movement space behind the computer in close quarters facilities. The cable management aspect of this invention provides neatness and frees the desk of excess clutter by directing wiring and cables through a rear corner grommet, through at least one wire management trough, and then out via a vertically positioned grommet disposed in an inset modesty panel for outlet connection.

It is a first object to provide an ergonomic corner computer desk that provides easy and comfortable access to both keyboard and mouse/trackball.

It is a second object to provide means of managing the electrical outlets of the advanced computer desk.

It is a third object to provide wire management means as part of the advanced corner computer desk.

It is a fourth object to retain the largest space possible behind a worker who toils within the confines of a cubicle.

It is a fifth object to enlarge the space within which a chair can move away from a keyboard to give a feeling of spaciousness to a worker in a confined area.

It is a sixth object to create a wire neat work surface in a corner desk.

These and other objects will in part appear obvious and will in part be discussed in the specification, drawings and claims of this invention.

DESCRIPTION OF THE PREFERRED EMBODIMENT

To understand the advanced computer desk of this invention, a brief discussion of the prior art corner computer desk of FIGURE 1 is in order.

Here, the prior art corner desk 10 features a pentagonal corner shelf 11, the two sides 12 of which adjacent the front edge 13 being full depth, i.e., the same depth as the furniture components adjacent thereto. That is, the depth of the two side edges 12 of the corner desk 10 are of the same depth as the two furniture components 15 on adjacent sides of the corner desk. These side components 15 can be of any configuration such as one of a file cabinet, printer stand, shelf, book case or other furniture member as may be desired. Here in FIGURE 1, a shelf 15, is depicted on the right of the right edge 12 of the prior art desk 10 and a storage cabinet 18 is shown on the left of the work surface 11 of the desk 10.

Keyboard 20, rests on keyboard shelf 21, moves in and out continuously from underneath work surface 11 and as can be seen sticks out into the room.

The reader's attention is directed to the relative positioning of the keyboard shelf 21, wherein the entire keyboard shelf 21 extends beyond the front edge of the adjacent furniture components 15 and 18. The abbreviation A.F.C. will be used to signify adjacent furniture component. A.F.C.'s can be shelving, low lateral files, a "return", etc., which are disposed adjacent the corner section.

In contrast FIGURE 2, which features the advanced computer desk of this invention 30, having a corner section 40, the work surface of which is the pentagonal shelf 41. It, 41 has side edges 43 and 44 which do not extend the full depth of the adjacent side furniture components. The front edge 45 of the corner section 40 is recessed, rearwardly away from the front edge 52 of the adjacent furniture component 50L, having shelf member 53 situated to the left and rearwardly also from the front edge 56 or the A.F.C. 50R shelf member 53 on the right of said advanced computer desk 30's corner section.

It is seen therefore that a generally U-shaped space 49, denoted in FIGURE 2 is defined by oblique side edge 51 of the left shelf 53, front edge 45 of corner section 40 and oblique side edge 57 of the right side shelf 55. The work surface 41 is pentagonal in shape and has a front edge slightly wider than the keyboard platform with mouse space 61. The two side edges 41 and 43 are disposed at a 45° angle, and are of shorter extension than the two rear edges that form a 90° corner.

1 Typical dimensions for the two smaller side dimensions 41 and 43 range from
2 fourteen to sixteen inches, whereas the two rear edges range from thirty to thirty-six
3 inches.

4 The preferred keyboard platform 60 used in this invention, has adequate
5 room laterally for the full size Windows® keyboard 61, as well as a mouse pad 17.
6 In extension this is about twenty-seven. The standard keyboard platform of twenty-
7 two inch widths may also be employed in the latter case as in the prior art corner
8 section, the mouse pad needs to be placed at a different elevation on the adjacent
9 side furniture component due to insufficient lateral extension of the keyboard
10 platform, see FIGURE 1 the use of the mouse at a different elevation and at some
11 distance makes for muscle strain. The same space that accommodates a mouse
12 pad will also permit use of a trackball if such is preferred by the typist.

13 The extension of the two rear edges 42 and 46 of work surface 41 of this
14 corner section 40 are of the exact same extension as the prior art corner section.
15 Thus it can be seen that the footprint of this invention, the advanced computer desk
16 corner section, is the same as for the prior art corner section.

17 An added benefit gained by having the recessed keyboard platform 60, is that
18 the deep rear corner formed at the intersection of edges 42 and 41, is easier to reach
19 than the rear corner shown in FIGURE 1. But more importantly, by having the seam
20 or groove between adjacent sections relocated to be at the back of the keyboard
21 recess, those persons who want to use the mouse at counter height, will not have
22 the irritation of the groove between sections to contend with, as is the case for
23 persons who put their mouse pad 18 over the groove at edge 12 of the prior art
24 corner unit, per FIGURE 1.

25 In the top perspective view of FIGURE 3, the mouse 80, is seen to have been
26 moved off the pad 17 to the shelf 55, from its normal position on mouse pad 17
27 which is disposed on the keyboard platform 60. But this was done to reemphasises
28 the fact that in this corner section 40, the mouse may be utilized readily at hand
29 without fear of hitting the crevice.

30 One big economic benefit to the consumer arises from the fact that this corner
31 section can be manufactured less expensively than the prior corner section, in that
32 a single edge bander pass can complete the lamination or veneering, as the case
33 may be, of the two side edges 41,43 and the front edge 45, all of which have a hard
34 corner interface from the horizontal work surface to the vertical side. Whereas in the

1 prior art, it was necessary to have a curved front edge 13 to avoid possible injury to
2 the corner section user, the front edge of the work surface of this invention is at a 90°
3 angle to the elevation of the work surface, 41.

4 As can be seen in FIGURE 3, when the keyboard platform 60 is extended to
5 its forward position for use, it appears to extend about four inches, equal to or less
6 than, beyond the edges of the two adjacent furniture components, but this is due to
7 parallax. A closer view with a better perspective, namely FIGURE 6, shows that the
8 keyboard platform 60 protrudes forwardly minimally if at all. This saving of as much
9 as ten to twelve inches over the inuse position of a prior art keyboard platform 21,
10 helps the worker to have more room to move his or her chair behind the corner
11 section since the user sits in a more forwardly position than with the prior art
12 computer corner section. By sitting closer to the monitor, eye fatigue is avoided
13 while the corner section 40 can be used by itself on a pedestal. What makes this
14 corner section 40 work best is to use the specially designed adjacent furniture
15 components 50L and 50R in conjunction therewith to create the advanced L-shaped
16 computer corner desk 30 of this invention.

17 In FIGURE 2 the adjacent furniture components 50 comprise shelves 53 and
18 55, the balance of the component being shown and described in the discussion of
19 FIGURE 10. Each of these shelves 53,55 has a front edge parallel to a rear edge
20 and a side edge normal to the rear edge. The shelves of these adjacent furniture
21 components also have an oblique edge, here 51 in one and 57 in the other
22 component, that intersect the front edge of the computer corner section to which
23 they are abutted at a 90° angle. Preferably the side edges of these adjacent furniture
24 components are of the same depth as the side edges of the corner section. When
25 these adjacent furniture components are attached to said corner section for added
26 stability, the pedestal shown in FIGURE 4 can be eliminated, as the corner section
27 40 will have adequate side-wise support.

28 While the adjacent furniture components 50L and R on both sides of the
29 corner section 40 are shown to comprise shelf members 53 and 55, cabinets having
30 an oblique side as opposed to a shelf's oblique edge may be used. Multiple shelves
31 and bookcases may also be incorporated into A.F.C.s and used as adjacent furniture
32 components. They too should preferably be attached to the corner section 40 for
33 added stability of the corner section, and configured with the oblique side, per
34 FIGURE 10.

1 The keyboard platform 60 preferably has a depth 62 from front to back
2 substantially equal to the oblique edge of the adjacent furniture components. For
3 ease of understanding, the reader is best directed to FIGURE 10 and the discussion
4 below.

5 FIGURE 4 illustrates the construction of the advanced computer desk with
6 A.F.C.'s adjacent the corner section 40 of this invention. Here corner section 40's
7 work surface underside 41 is seen having the aforementioned rear edges 42 and 46
8 which interface at a corner 47, and the two shorter extension side edges 44 and 45
9 which respectively lie between the front edge 45 and the respective rear edge. An
10 optional mount plate 65 may be conventionally attached to underside 41, to receive
11 a conventional pedestal 66 of any standard configuration. The keyboard platform 60
12 is preferably retained by a commercially available swing away hinge for mounting
13 to the underside of the work surface 41B. Such a hinge 89 is shown in FIGURE 5.
14 One source of such a hinge bracket 89 is Webber and Knapp. Hinge bracket 89
15 permits the keyboard platform 60 be moved to a downwardly and rearwardly position
16 beneath surface 41 when not being utilized. Slide out brackets, not seen, which are
17 mounted to the underside of the work surface, 41B may also be employed for
18 mounting the keyboard but are less preferred.

19 In this top plan view A.F.C. 50L and 50R are seen adjacent the two short
20 sides of the corner section 40 of the advanced corner desk of this invention.

21 The recessed modesty panels 92 for the A.F.C.s and 93 on each of the two
22 rear sides of the corner section are seen to be recessed in from the outer edge of the
23 A.F.C. and corner section respectively as denoted by the dashed lines set in from the
24 edge. By recessing the placement of the modesty panels less than about two
25 inches, electrical plugs can be engaged in a wall-mounted outlet, without the need
26 to move the entire desk away from the wall a distance corresponding to the
27 extension of the rigid plug, usually less than two inches.

28 For example, wiring with a plug could exit the vertical wire grommet 83
29 discussed supra to engage a wall socket. See FIGURE 7.

30 The rear aperture 91 through which the monitor's video connector cable and
31 electrical wire can be fed is seen here as well as in FIGURE 5.

32 The two wire management troughs 87 and 87A discussed in detail with
33 reference to FIGURE 5 are seen here as well.

34 In FIGURE 4 the master control switch 90 for the electrical components,

1 printer, mother computer and the like are seen mounted to the underside of the shelf
2 of 50R, whereas in FIGURE 5, this switch 90 is shown in an alternative equally as
3 accessible location on the underside of the corner section 40. Such choice is at the
4 discretion of the buyer for personal comfort.

5 The surge protector 88 is shown in dashed lines mounted on the underside
6 of the corner section 40. While any surge protector of sufficient joules can be
7 utilized, I prefer to use one that incorporates protection for both telephone via an RJ
8 11 jack, and LAN cabling, via an RJ 45 jack, both of which are surge protected.
9 Such surge protectors are available in the marketplace.

10 If desired another vertical grommet 83 may be disposed in an A.F.C. 50L
11 modesty panel 92.

12 While an ordinary wood shelf or high pressure laminate cover or core be used
13 as the keyboard platform, I prefer to use a hard rubber unit which is easily installed,
14 dirt resistant and made for ergonomic use. Such units have a gel palm rest, are
15 cleaned with soap and a little water. Keyboard platforms of this nature are made by
16 Grand Stands, Inc. among others.

17 The discussion moves now to FIGURE 5, wherein the wire management
18 electrical outlet controls aspect of this invention are seen in close-up. At least one
19 and preferably a pair of channels 87 and 87A are attached by screws to the
20 underside 41B of the corner section 40. The location of the aforementioned
21 components can be readily discerned on the completed corner section, as template
22 46 notes where the pedestal mounting plate 65 is to be attached.

23 The wire and electrical management system is controlled by the on-off master
24 switch 90 mounted to the underside of the work surface 41. This may be a rocker
25 switch or a pushbutton, since both exist in the marketplace. The wiring from switch
26 90, designated 95 passes through the length of channel 87, makes a bend and
27 comes out channel 87A and terminates in a three-prong electrical plug 96, for added
28 safety.

29 At some location along line 85 the wiring for the surge protector 88 is
30 interposed on one side of the wiring, in a conventional manner. Surge protector units
31 which have, as this one does, a plurality of electrical outlets thereon are well known
32 and are available from such vendors as Belkin, Curtis, Kensington and others.
33 Reference is made to FIGURE 8, the wiring diagram. Surge protector unit 88 shown
34 include provision to protect the modem and calling as discussed infra. Thus as is well

1 understood, the telephone wire with modular jacks thereon, shown as bundle 94,
2 also plugs into the surge protector 88. Until such time, as switch 90 is activated to the
3 on position, the components plugged into the surge protector's outlets are
4 inoperative.

5 From FIGURE 4 it is shown that cables from the corner section top computer,
6 if such is utilized, an adjacent printer and/or scanner, and from the monitor pass
7 preferably through the corner section 40's top 41's large aperture 91 in the rear
8 corner. The aperture should be of a diameter to permit a plurality of component line
9 cords to pass there through. The use of this aperture 91 enhances the aesthetics,
10 especially when a modesty panel is employed. Wires need not drape down the panel
11 and then be tucked around the panel. Nor need the panel be drilled or raised to
12 permit the wiring from the computer components to be plugged into the surge
13 protector.

14 The channels 87 and 87A, seen in FIGURES 4 and 5, are referred to in the
15 industry as J-shape wire managers. They may be attached to the underside of the
16 corner section 41B by double sided tape or by stapling them to the surface. These
17 wire managers are the subject matter of U.S. Design Patent 295,521 and are readily
18 available in the marketplace in a variety of colors as may be desired from Doug
19 Mocket and Company of Torrance, California.

20 FIGURE 6 shows the seam of the A.F.C. where it abuts the corner section in
21 an out of the way location spaced closer to the rear corner of the corner section 40.
22 A modesty panel 92 is shown conventionally attached recessed inwardly on the
23 A.F.C. 50R from the side edge, here 44, of the corner section 40, for the reasons
24 recited in the discussion of FIGURES 4 and 7.

25 FIGURE 7 is a rear perspective view that illustrates two additional features
26 of this invention. The first is the use of the recessed modesty panels 92 and 93
27 respectively and which were discussed earlier. Panel 93 is seen to be attached in
28 conventional manner to the corner section, while panel 92 is attached as noted to the
29 adjacent furniture component. By recessing the modesty panels between two and
30 four inches from the rear surface 46 of corner section unit 46, and 55R of the
31 adjacent furniture component, cables and plugs such as 98 can be plugged into
32 outlets behind edges 46 and 55R— not seen in this figure, and thereby permitting the
33 A.F.C. to abut the wall without interfering with the electrical plugs present. Note wire
34 and plug 98 peeking from around the corner, which are not visible from above.

1 The second additional feature present in this figure is vertical wire grommet
2 83 which has at least one and often three slots for the receipt of individual wires 102
3 to pass for example from corner section lamp 101 through the grommet 83 to the
4 surge protection unit 88 discussed elsewhere herein. Grommets of this nature are
5 manufactured by Hardware Concepts Inc. of Opa Locka, Florida. If the user desires
6 to plug the desk lamp into the surge protection unit, the rear surfaces 46 and 55R
7 need only be spaced less than ½ inch from any wall, as opposed to the usual two
8 inches or so needed for a wire and its plug, or more room if a multi-outlet adapter is
9 employed in the typical wall two gang electrical box.

10 More often however, the electrical wire and plug from the surge protection unit
11 88 passes the other direction from beneath the desk pedestal 41 through the
12 grommet to the wall outlet (electrical interconnect).

13 It is deemed preferable to employ both the concept of the recessed modesty
14 panel and at least one wire grommet for maximum flexibility in location and user
15 convenience, but either feature can be utilized alone.

16 This view also shows the location of aperture 91 at the rear corner and the
17 disposition of video cable and electrical line 99 passing therethrough to the surge
18 protector unit 88 and the computer respectively.

19 Previously reference has been made to FIGURE 8, the wiring diagram.
20 Here it is seen that switch 90 is placed in line on wiring 95 such that surge protection
21 multi-outlet box 88, which is also disposed on one side of line 95, will not function
22 until switch 90 is in the on-position. Any conventional toggle or pushbutton switch
23 may be employed as the master control.

24 FIGURE 9 is an inverted elevational view to illustrate both the configuration
25 and the mounting of the J-shaped channels 87 and 87A for wire management on a
26 substrate. Here they are mounted to the underside of writing surface 41, of corner
27 section 40.

28 In FIGURE 10, the entire advanced computer corner desk 30 of this invention
29 is shown perspective seen up against a wall 109 as contrasted to a top plan view of
30 FIGURE 4. In the middle tucked into the corner is the corner section 40 comprised
31 of the corner writing panel 41 and attached keyboard platform 60. Note the absence
32 of the pedestal for support. Support here comes from having the corner section 40
33 attached to the A.F.C. 50L which is referred to in the industry as a "return" and which
34 comprises the shelf 53, the vertical pedestal 103 disposed between the shelf 53 and

1 the floor, and the back panel 104 to provide needed rigidity. An optional shelf 106 is
2 shown attached to the back panel. Such is considered conventional for book storage,
3 pictures and other personal effects.

4 On the other side of the corner surface 41 is the A.F.C. 50R. It too comprises
5 a "return" having a pedestal 103, and an optional modesty panel recessed inwardly
6 for the reasons aforementioned, 92 - shown in dashed line. The corner section
7 likewise has a modesty panel 93, for modesty and for support. Thus it is seen that
8 reduced to its basics, the desk of this invention comprises a left return having at least
9 pedestal and shelf, and a right return with a pedestal and a shelf. The back panel
10 and modesty panels, though optional lend rigidity and aesthetics and are highly
11 recommended. The term at least is used to describe this desk, as one may choose
12 to add a roll-away set of shelves such as those designated 97 in FIGURE 6, or one
13 can have shelving or drawers physically attached to the shelf 53 or 55 as may be
14 desired, but disposed such as not to interfere with the required oblique side of each
15 of 50L and 50R.

16 While shown in FIGURE 10 with but one back panel, modesty panels 92 and
17 93 can be replaced by a rear panel such as 104 as well when the desk is to be used
18 in the middle of a room, as one quarter of four cubicles abutted together.

19 One furniture feature that I prefer as a more desirable keyboard platform
20 rather than a wooden one is the hard rubber unit with gel wrist rest made by Grand
21 Stands, Inc. The unit is readily cleaned with a moist rag when combined with the
22 Webber & Knapp or a Sunray mount. The keyboard can be placed at a correct
23 height ergonomically correct for the individual user. These keyboard platforms also
24 provide lateral space for a mouse or trackball.

1 By combining the unique recessed keyboard platform construction, in
2 combination with the wire management and outlet controls and the use of
3 aforementioned grommets, a most advanced computer corner section has been
4 achieved. This corner section allows for the user behind the keyboard to be the ideal
5 fourteen inches from the monitor, and permits the user to reach the far corner of the
6 corner section easier. This means that more of the available space is usable by the
7 typist so they have adequate room to roll back an ergonomic chair from its inuse
8 position and still not bump into a credenza or other furniture usually placed forty-eight
9 inches to their rear. In addition, all wiring is out of the way such that the janitorial staff
10 need not worry about causing problems with the computer equipment due to
11 inadvertent unplugging of a key component.

12 The typist may also enjoy a one button operation safety factor for his or her
13 computer corner section. All of the computer parts are surge protected and no
14 bending is needed to activate the computer system.

15 Usually the corner section will not be used alone, but will be integrated into
16 and form one aspect of the advanced computer corner desk of this invention as
17 described herein.

18 The advanced computer corner section can have any material utilized for its
19 writing/work surface. Mention may be made of wood, high pressure laminate, such
20 as Wilsonart® or Formica®, and wood veneers. The same is true for the materials
21 to be used for the modesty panel accessory that prevents a person's legs from being
22 seen while seated at the corner section.

23 In conclusion it is seen that I have designed a data-electrified computer corner
24 workstation with an inset fully adjustable keyboard platform. The inseting of the
25 keyboard platform provides a space-saving advantage in that it permits more square
26 footage to be allocated for the computer user's chair within the defined workstation
27 Preferably this keyboard platform is a rubberized one and includes a built-in wrist
28 rest, and is laterally wide enough for placement of a mouse or trackball on the right
29 or left side of the keyboard placed thereon. As to the data electrification aspect ,
30 there is provided a surge protected multi-outlet connector box, preferably with phone
31 and data jack surge protection, and with preferably a separate user mountable on-
32 off switch. Wire management includes a grommet for the exiting of above work
33 surface wires and cables to below the work surface, at least one wire management
34 trough and a vertical disposed grommet positioned in a spaced in from the edge

- 1 modesty panel to permit the particular wiring and cables to exit from beneath the
- 2 work surface to wall or floor mounted interconnects.

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1 Since certain changes may be made in the above described apparatus without
2 departing from the scope of the invention herein involved, it is intended that matter
3 contained in the above description and shown in the accompanying drawings shall
4 be interpreted as illustrative and not in a limiting sense.

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